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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,079	11/19/2001	Robert A. Roth	DP-306071	9447
7590	01/22/2004		EXAMINER	
VINCENT A. CICHOSZ DELPHI TECHNOLOGIES, INC. Legal Staff, Mail Code: 480-414-420 P.O. Box 5052 Troy, MI 48007-5052			RIVELL, JOHN A	
			ART UNIT	PAPER NUMBER
			3753	
			DATE MAILED: 01/22/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/992,079	ROTH, ROBERT A.
	Examiner	Art Unit
	John Rivell	3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 11/20/03(amd), 7/30, 11/12, 12/4/03 (IDS).

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-20 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 12 November 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_ .

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,8,9 . 6) Other: \_\_\_\_\_ .

Claims 1-20 remain pending.

Applicant's arguments, see paper no. 6, pages 8-11, filed November 12, 2003, with respect to the rejection(s) of claim(s) 1-20 under 35 §103(a) using Hutchings as a primary reference have been fully considered and are persuasive in view of the now amended claim language including "a valve seat formed on the interior of the housing". Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Wynn (U.S. Pat. No. 4,129,145 cited by applicant).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wynn (4,129,145) in view of Hoover (4,964,391), further in view of Feinberg (3,234,959).

The patent to Wynn discloses "a check valve... comprising: a valve housing (tubular sleeve 10) adapted to be disposed in an outlet member (flow conduit 40, 41)...; a valve seat (16) formed on an interior surface of said valve housing (10); a valve member (22) disposed in said valve housing (10) and having a closed position (fig. 1b, 1c) to engage said valve seat (16) to prevent (fluid) from flowing through the outlet member (40, 41) and an open position (fig. 1a) to allow (fluid) to flow through the outlet member (40, 41); and said valve member (22) having a (plurality of flow paths) to allow

flow from said valve member (22) when said valve member is in said open position" as claimed in claim 1.

Thus Wynn discloses all the claimed features with the exception of having utility in a "fuel pump" thus controlling "fuel flow" as well as "a single outlet port" in the valve member.

Firstly, the patent to Hoover discloses that it is known in the art to employ a check valve device 28, located in the outlet conduit of a fuel pump 22 of a vehicle leading to an engine 26 of the vehicle for the purpose of preventing backflow of fuel from the engine to the fuel pump.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ the device of Wynn as a check valve device in the outlet conduit of a fuel pump feeding fuel to an engine of a vehicle for the purpose of preventing backflow of fuel from the engine to the fuel pump as recognized by Hoover.

Secondly, the patent to Feinberg discloses that it is known in the art to employ a single radial outlet port 35, or 36 in a reciprocating valve member conducting fluid flow from a hollow interior of the valve member to the exterior of the valve member upon the valve member moving to an open position for the purpose of providing a designed flow rate through the valve (column 3, lines 24-41).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Wynn a single port of designed size for the purpose of a designed flow rate through the valve as recognized by Feinberg.

Regarding claims 11 and 19, the above applies equally as well.

Regarding claims 2 and 12, in Wynn "said valve housing (10) has a passageway (passing through seat 16) extending axially therethrough to receive said valve member 22" as claimed.

Regarding claims 3 and 13, in Wynn "said valve housing (10) has an enlarged opening at one end (at the left end receiving spring 36 or at the right end downstream of seat surface 16) of said passageway" as claimed.

Regarding claims 4 and 14, in Wynn, as modified by Feinberg, "said valve member (tubular member 28 or 29) has a flow port (the interior bore of each) extending axially therein" as claimed.

Regarding claims 5 and 15, in Wynn, as modified by Feinberg, "said outlet port (35 or 36 as in Feinberg) extend radially in said valve member and communicates with said flow port" as claimed.

Regarding claims 6 and 16, in Wynn "a spring (36) disposed about said valve member (22) to urge said seal (38) and said valve member (at the valve head/right end of valve 22) toward said valve seat (16)" as claimed.

Regarding claims 7 and 17 (note above), in Wynn "said spring (36) comprises a coil spring" as claimed.

Regarding claims 8, 11 and 19, in Wynn "said valve member (22) has an annular groove (at surfaces 24 and neck 26) adjacent said valve seat (16)" as claimed.

Regarding claims 9, 11 and 19, in Hutchings "a seal (38) disposed in said groove" for contacting said valve seat (16) when said valve member is in said closed position as claimed.

Regarding claim 20, in Wynn, as modified by Feinberg, "said valve member (tubular member 28 or 29 as in Feinberg) has a flow port (the interior bore therethrough) extending axially into one end thereof and said outlet port (35 or 36) extends radially through said valve member and communicates with said flow port" as claimed.

***Response to Arguments***

In response to applicant's arguments that Hoover, Feinberg and now presumably Wynn lack "a fuel pump having an outlet member having a passageway therethrough, a valve housing adapted to be disposed in an outlet member of a fuel pump and a valve member having a single outlet port to allow flow from the valve member when the valve member is in the open position" one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

It is agreed that each reference individually lacks certain claimed features. Anticipation by the reference of all of the claimed features is not required for a reference to be considered proper under 35 §103(a).

Here however, under 35 §103(a), Wynn is used to illustrate known check valve devices which disclose "a check valve... comprising: a valve housing (tubular sleeve 10) adapted to be disposed in an outlet member (flow conduit 40, 41)...; a valve seat (16) formed on an interior surface of said valve housing (10); a valve member (22) disposed in said valve housing (10) and having a closed position (fig. 1b, 1c) to engage said valve seat (16) to prevent (fluid) from flowing through the outlet member (40, 41) and an open position (fig. 1a) to allow (fluid) to flow through the outlet member (40, 41); and said valve member (22) having a (plurality of flow paths) to allow flow from said valve member (22) when said valve member is in said open position" as claimed in claim 1.

Hoover is used to illustrate that it is known in the check valve art to employ a check valve device 28, located in the outlet conduit of a fuel pump 22 of a vehicle leading to an engine 26 of the vehicle for the purpose of preventing backflow of fuel from the engine to the fuel pump.

Feinberg is used to illustrate that it is known in the check valve art to employ a single radial outlet port 35, or 36 in a reciprocating valve member conducting fluid flow from a hollow interior of the valve member to the exterior of the valve member upon the valve member moving to an open position for the purpose of providing a designed flow rate through the valve.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, as set forth above, Hoover is used to reasonably suggest to one of ordinary skill in the art the utility of the valve element of Wynn in the environment of a fuel pump feeding fuel to an engine such that the fuel flow from the pump to the engine, in the communication conduit, is one way as provided for by the teaching in Hoover of a one way check valve in the fuel conducting line. Further, Feinberg is used to reasonably suggest to one of ordinary skill in the art the utility of a single valve port in a hollow sleeve type

reciprocating valve element so that a designed flow rate, determined by the size of the single hole, is employed in a check valve to limit the flow rate in check valve flow devices.

In response to the argument that the "claimed combination is novel and unobvious because the check valve has a mono-port on the pintel, which reduces oscillations and objectionable noise" applicant provides no convincing reasoning why the "mono-port" 35 or 36 on the "valve pintel" 28, 29 of Feinberg, for example, does not similarly reduce "oscillations and objectionable noise" in a one way flow, check valve environment.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

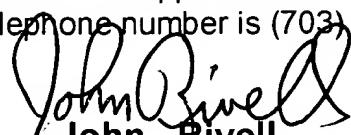
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (703) 308-2599. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on (703) 308-1272. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 3753

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.



John Rivell

**Primary Examiner**  
**Art Unit 3753**

j.r.